

## ABSTRACT OF THE DISCLOSURE

A system is described for transmitting data in a serial bidirectional bus with a control device (1) comprising a send and receiving unit (34) for data fields (7, 8 and 9) combined into a data frame (6), and with bus subscribers (2, 3 and 4) which comprise an evaluation circuit (10) for reading in and reading out data fields (7, 8, 9, 14, 15 or 16) in data frames (6, 11), with at least the bus subscriber (4) at the bus end opposite of the control device (1) comprising a send device (12) for a data frame (11). In order to provide simple constructional conditions it is proposed that at least the bus subscriber (4) at the end of the bus comprises a control stage (13) which is activated by a received data frame (6) and triggers the send device (12) depending on the receipt of a data frame (6) within the terms of the transmission of a data frame (11) for at least the data fields (14, 15 and 16) of the bus subscribers (2, 3 and 4).

(Fig. 1)